

REMARKS

Request for Reconsideration

Applicants have carefully considered the matters raised by the Examiner in the outstanding Office Action but remain of the opinion that patentable subject matter is present. Applicants respectfully request reconsideration of the Examiner's position based on the above amendments to the claims and the following remarks.

Present Invention

One of the novel aspects of the present Invention is that the support is comprised of a plurality of layers wherein one of the lower layers of the plurality of layers is a layer of carbon fiber. As taught on page 6 of the Application, an uppermost layer, referred to as an adhesive layer, contains a compound exhibiting glass transition point of 80 to 350°C. Examples of such material that are given are polyamides, polyethylene terephthalate, paraffin and graphite. Below this upper layer is a layer of carbon fiber. Figure 1 illustrates such an arrangement. Reference character 11 is directed to the lower carbon support while reference character 12' is directed to the adhesive layer or the uppermost layer.

The Examples also illustrate this lower layer of carbon fiber. Specifically, Examples 4-7 employ an uppermost layer of polyimide, PET, paraffin or graphite. Samples 8 and 9 illustrate where the carbon fiber is actually a carbon fiber plate. Example 8 illustrates where this carbon fiber plate has been sandwiched between two polyimide layers, while Sample 9 illustrates where the carbon plate is a bottom layer.

The data shown in Table 1 of the Application illustrates the novel aspect of the combined lower layer of carbon fiber and the upper layer of material having the specified glass transition. As can be seen, the results for the present Invention, Sample Nos. 4-9, are far superior to the results for the use of other types of laminates such as glass, aluminum or copper in combination with the carbon fiber. Thus, Applicants submit that the combination of the layers, as recited in the claims, provides a distinct improvement which is unique.

The claims have been amended herein particularly point out and distinctly claim this aspect of the present Invention.

Claims Status

Claims 1-5, 7, 8, 10-15, 17, 18, and 20-22 are pending in this Application.

Claims 1 and 11, which are the independent claims, have been amended herein to recite that a lower layer of the plurality of layers is a layer of carbon fiber. As noted above, support for this amendment can be found in the Example, and specifically in Table 1, as well as the disclosure on page 6 of the Application.

Claims 8, 10, 18 and 20 have also been amended to bring them in line with Claims 1 and 11. Respectfully, no new matter has been added by way of these amendments.

Applicants submit that the amendments made herein were necessitated by the Examiner's new grounds for rejection. Thus, it is respectfully requested that this amendment be considered by the Examiner and entered since it is deemed to place the case in condition for allowance.

Rejection

The claims have been rejected as being unpatentable over a combination of Isoda and Chen. Isoda had been cited to teach the radiation image conversion panel comprising a support and a phosphor layer. Chen had been cited to teach a support of two or more layers. The Examiner had pointed to Example 1 to take the position that Chen taught a support comprising a plurality of layers wherein one of these layers is a carbon layer. Applicants respectfully traverse this position.

Turning to Chen and Example 1, it can be seen that carbon black has been used to tint the polyethylene layer, see Column 8, lines 53-56. Carbon black is a well known coloring agent which is usually provided in a particulate form. Chen teaches, at Column 3, lines 27-35, that the substrate can be tinted with pigments or dyes such as carbon black, titanium dioxide or barium sulfate. In other words, Chen is teaching simply that one can color one of the layers.

In contrast, the present Invention employs a layer which is made of carbon fiber. Carbon fiber is, by definition, different than carbon black, as is recognized by those of skill in the art. Respectfully, a layer of carbon fiber is not equivalent, or similar to, the use of carbon black tint material.

Applicants have specifically amended its claims to recite that a lower layer of the plurality of layers is a carbon fiber. It is submitted that such an amendment clearly distinguishes over the material of Chen.

It will be noted that Applicants use the term "lower layer" so as to distinguish it from the uppermost layer which has the specific glass transition temperature of 80 to 350°C. By "lower layer" it will be understood that that layer can be the bottom layer or an intermediate layer but it is clearly not the uppermost layer.

It is further submitted that Chen does not suggest the use of carbon fiber as one of its flexible materials for forming its support since such material is completely devoid of the list of examples given at Column 2, line 63 through Column 3, line 7.

Turning to Isoda, Isoda does not teach nor suggest the use of a carbon fiber layer in its substrate. Thus, it is respectfully submitted that neither Chen nor Isoda taken alone or in combination teach or suggest the multiple layer substrate of the Invention as claimed since neither of them teach or suggest using a multiple layer substrate wherein one of the lower layers is a layer of carbon fiber.

Extension of Time/Additional Fees

Should any extensions of time or fees be necessary in order to maintain this Application in pending condition, appropriate requests are hereby made and authorization is given to debit Account #02-2275.

Conclusion

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance and reconsideration and allowance are respectfully requested.

Respectfully submitted,

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